

SOLAR WATER HEATING CALCULATION FORM

CF-SR

Project Title

Date

CF-SR- Solar Water Heating Calculation Form

OG-300

Property Name: _____

Building Type: (Single Family, Multi-family): _____

Total Conditioned Floor Area (CFA)ft²: _____

Climate zone (1-16): _____

INPUTS FOR SYSTEMS SRCC OG-300:

1. Solar Energy Factor of OG-300 solar water heating system as listed in SRCC directory	
2. Energy Factor of Water Heater (enter .6 for gas .9 for electric)	
3. Constant - 41045 (amount of energy used in SRCC test)	41045.0
4. Constant - 3500 average parasitic loss value in SRCC test	3500.0
5. Gallons per day use value calculated as: (21.5 x .0014 x CFA) from top of page	
6. Constant – 64.3 gallons used in SRCC test method	64.3
7. Hot water supply temperature 135 degrees	135.0
8. Enter inlet water temperature (inlet water temperature values are listed on Table 1 by Climate Zone)	
9. Difference in supply and inlet water temperature (subtract line 7 from line 8)	1500.0
10. Constant - 1500 Solar radiation value used in SRCC test	
11. Solar radiation level from Table 1 below	
CALCULATION FOR SYSTEM	
12. Multiply line 2 by line 3	
13. Divide line 12 by line 1	
14. Divide line 5 by line 6	
15. Divide the result in line 9 by 77	
16. Subtract 1 by line 2	
17. Multiply lines 13 by line 14 by line 15	
18. Multiply lines 4 by line 16	
19. Add line 17 to line 18	
20. Divide line 19 by line 3	
21. Divide line 10 by line 11	
22. Multiply line 20 by line 21	
23. Subtract 1 from line 22	
Solar Fraction (from line 23)	

Table 1

Climate Zone	Water Temperature	Solar Radiation	Climate Zone	Water Temperature	Solar Radiation
1	53.90	1220	9	63.76	1685
2	57.52	1220	10	63.76	1612
3	57.69	1533	11	61.00	1580
4	59.12	1601	12	59.65	1670
5	57.93	1602	13	63.99	1726
6	61.55	1599	14	61.48	1827
7	62.63	1586	15	73.55	1884
8	62.97	1682	16	50.54	1513

Note: For all solar water heating systems rated using the SRCC OG 300 test method a copy of the SRCC test result must be attached along with this form and with the rest of the documentation. To use this approach the water heater used in compliance has the same fuel type and energy factor that was used in the SRCC test.